

What is claimed is:

1. Apparatus for treating tachyarrhythmias, comprising:

treatment means for delivering a first therapy to a patient's heart to treat  
5 tachycardia and a second therapy to said patient's heart to treat fibrillation;

first means for sensing electrical signals from said patient's  
heart indicative of the depolarization of a chamber or chambers of said  
patient's heart;

means for measuring and storing the intervals separating said  
10 electrical signals;

means for detecting the occurrence of a tachyarrhythmia; and  
tachycardia/fibrillation discriminator means responsive to said  
detecting means for selecting between said first and second therapies.

15 2. The apparatus of claim 1 wherein:

said discriminator means in turn comprising:

means for sorting said measured intervals into interval ranges;  
means for determining the numbers of intervals within each said  
20 interval range;

means for identifying ones of said interval ranges which have the  
highest numbers of said stored intervals;

means for determining the total number of said stored intervals falling  
within said identified interval ranges;

25 means for deriving a variable threshold criterion varying as a function of the  
length of the intervals separating preceding depolarizations; and

means for triggering said first therapy if said total number meets said  
variable threshold criterion.

30 3. The apparatus of claim 1 wherein the deriving means comprises means for  
deriving said threshold criterion as a value which increases as an inverse function of  
the length of the intervals separating preceding depolarizations.

4. A device according to claim 1 wherein the deriving means comprises means for deriving said threshold criterion as a value which increases as an inverse function of the length a defined percentile interval over a sequence of a predetermined number of intervals separating preceding depolarizations.

5. A device according to claim 1 wherein the deriving means comprises means for deriving said threshold criterion as a value which increases as an inverse function of the length of the 75th percentile interval over a sequence of a predetermined number of intervals separating preceding depolarizations.